*Thermochimica Acta*, 218 (1993) 477
Elsevier Science Publishers B.V., Amsterdam



# AUTHOR INDEX

Abdel-Fattah, W.I. 229, 465
Anthony, T.R. 257
Armstrong, B.H. 1

Baba, T. 329
Banholzer, W.F. 257
Baruah, G.C. 425, 435
Batchelor, W.J. 113
Beecher, S.C. 277
Bogaard, R.H. 29, 373
Bora, M.N. 425, 435
Bucur, R.V. 57

Černý, R. 17, 173
Chab, V. 173
Chernyshev, A.P. 195
Chi, T.C. 29

Desai, P.D. 373
De Witt, D.P. 317

Egry, I. 445

Fan, H.T. 71
Finlayson, T.R. 113, 135
Fricke, J. 269
Fukusako, S. 401

Glorieux, C. 123
Griffiths, J.R. 113
Groß, U. 455

Hahne, E. 341, 455
Havill, T.N. 29
Hixson, R.S. 183
Ho, C.Y. 29, 373
Hoch, M. 305
Hofman, R. 123
Hong, J.H. 329
Horibe, A. 401
Hümmer, E. 269

Jäger, H. 183
James, H.M. 29
Johansson, B. 145

Kandasamy, K. 57
Kaschnitz, E. 183
Klemens, P.G. 247
Kobayashi, M. 329
Kobzev, G.A. 291

Lechner, Th. 341, 455
Lewis, F.A. 57
Li, H.H. 373
Lohöfer, G. 445
Lu, X. 269
Lukes, I. 173

Maesono, A. 155
Melnitzky, S. 183

Neuer, G. 211, 305
Notter, W. 455
Nour, F.A. 229, 465

Onn, D.G. 257, 277
Ono, A. 329
Otowski, W. 123

Peng, G.S. 101
Petrov, V.A. 195, 291
Pitzer, K.S. 413
Pottlacher, G. 183
Přikryl, P. 17

Qiu, Y.Z. 257

Rettelbach, Th. 269

Sakamoto, Y. 57
Sasik, R. 173
Sauerland, S. 445
Schimmel, W.P. 351
Smith, T.F. 135
Söderlind, P. 145
Solozhenko, V.L. 221, 395
Sterner, S.M. 413
Suliyanti, M.M. 329

Tago, M. 401
Talukdar, C.L. 425, 435
Tera, F.M. 229
Thoen, J. 123
Titov, V.E. 195
Tong, X.Q. 57
Tye, R.P. 155

Vorobyev, A.Yu. 195

Wang, H.P. 71
Watanabe, H. 365
White, D.A. 317
White, G.K. 83
Winkler, M.A. 183
Witek, A. 257
Wolff, E.G. 101

Yamada, M. 401

Zentner, L.K. 317

*Thermochimica Acta*, 218 (1993) 479–484
Elsevier Science Publishers B.V., Amsterdam



# SUBJECT INDEX

Absorption
Thermal radiative properties of magnesium oxide at high temperatures 195
Absorption coefficient
Measurement of thermal radiation and optical properties of refractory oxides and their melts under $CO_2$ laser 291
Actinide
Calculated thermal expansion of d and f transition metals 145
Activation energy
Investigation on the thermodynamic properties of some natural silk fibres with various physical methods 425
Studies on the dielectric properties of some natural (plant) and synthetic fibres in audio frequency range and their DC conductivity at elevated temperature 435
AE
New acoustic detection technique for a magnetocaloric effect 123
Aerogel
Opacified silica aerogel powder insulation 269
Alloy
A model of binary alloy solidification in the gravitational field 17
Thermoelectric power of selected metals and binary alloy systems 29
Thermal expansion studies of pre-transformation behaviour 135
Analysis
Processing of interferometric signals for a CTE measurement system 101

Binary system
A model of binary alloy solidification in the gravitational field 17
Thermoelectric power of selected metals and binary alloy systems 29
Equations of state for solid NaCl–KCl and saturated liquid NaCl–KCl–$H_2O$ 413
Black body
Spectral emittance and temperature determination of carbon/SiC and SiC/SiC composites 305
Boron nitride
Thermodynamics of dense boron nitride modifications and a new phase $P,T$ diagram for BN 221
Boundary
Analysis of a one-dimensional solidification problem with two-phase moving boundaries 71

Calcination
Thermal expansion application to assess calcination of bovine hydroxyapatite 465
Calibration
Reference materials for thermal expansion: certified or not? 83
Calorimetry
Thermal constants for Ni, NiO, MgO, MnO and CoO at low temperatures 365
Carbon
Thermophysical properties of POCO AXF-5Q graphite up to melting 183
Ceramic
Measurement of thermal radiation and optical properties of refractory oxides and their melts under $CO_2$ laser 291
Thermophysical properties of the composite ceramic–salt system ($SiO_2/Na_2SO_4$) 455
Composite
Modeling the thermal conductivity of mullite/cordierite composites 277
Spectral emittance and temperature determination of carbon/SiC and SiC/SiC composites 305
Thermal transport across delaminations in aerospace composite laminate materials 351
Conduction
Heat conduction in solids by phonons 247
Conductivity
Heat conduction in solids by phonons 247
Thermal conductivity of natural and synthetic diamonds with differing isotope contents 257
Opacified silica aerogel powder insulation 269
Modeling the thermal conductivity of mullite/cordierite composites 277
Thermal constants for Ni, NiO, MgO, MnO and CoO at low temperatures 365
Thermophysical properties of stainless steels 373
Studies on the dielectric properties of some natural (plant) and synthetic fibres in audio frequency range and their DC conductivity at elevated temperature 435

Cordierite
Modeling the thermal conductivity of mullite/cordierite composites 277
Creep
Thermal expansion measurements on creep tested Mg-PSZ 113
CTE
Processing of interferometric signals for a CTE measurement system 101

Decomposition
Studies on the dielectric properties of some natural (plant) and synthetic fibres in audio frequency range and their DC conductivity at elevated temperature 435
Deformation
Gorsky effect consequences of lattice expansive strain gradients in diffusion of hydrogen in metals 57
Delamination
Thermal transport across delaminations in aerospace composite laminate materials 351
Diamond
Thermal conductivity of natural and synthetic diamonds with differing isotope contents 257
Diffusion
A model of binary alloy solidification in the gravitational field 17
Gorsky effect consequences of lattice expansive strain gradients in diffusion of hydrogen in metals 57
Diffusivity
Thermal conductivity of natural and synthetic diamonds with differing isotope contents 257
Experimental investigation of the nonuniform heating effect in laser flash thermal diffusivity measurments 329
Finite pulse time effects in flash diffusivity measurements 341
Thermal transport across delaminations in aerospace composite laminate materials 351
Thermal constants for Ni, NiO, MgO, MnO and CoO at low temperatures 365
Thermophysical properties of stainless steels 373
Thermophysical properties of the composite ceramic–salt system ($SiO_2/Na_2SO_4$) 455
DSC
Investigation on the thermodynamic properties of some natural silk fibres with various physical methods 425
DTA
Investigation on the thermodynamic properties of some natural silk fibres with various physical methods 425
DTG
Investigation on the thermodynamic properties of some natural silk fibres with various physical methods 425

Electron
The electron–phonon interaction and melting of metals 1
Emissivity
Measurement of thermal radiation and optical properties of refractory oxides and their melts under $CO_2$ laser 291
Temperature measurements during the galvanneal process 317
Emittance
Total normal and spectral emittance of refractory materials for high temperature ovens 211
Spectral emittance and temperature determination of carbon/SiC and SiC/SiC composites 305
Enthalpy
Investigation on the thermodynamic properties of some natural silk fibres with various physical methods 425
Entropy
Investigation on the thermodynamic properties of some natural silk fibres with various physical methods 425
Excimer laser
Nonequilibrium solidification of monocrystalline Si induced by ArF-excimer-laser irradiation 173
Extinction coefficient
Opacified silica aerogel powder insulation 269

Feldspar
Aesthetic parameters of highly feldspathic porcelain 229
Fibre
Spectral emittance and temperature determination of carbon/SiC and SiC/SiC composites 305
Film
Characterization and thermal properties evaluation of thin films, wafers and substrates 155
Finite pulse time
Finite pulse time effects in flash diffusivity measurements 341
Furnace
Total normal and spectral emittance of refractory materials for high temperature ovens 211

Fusion
Thermal radiative properties of magnesium oxide at high temperatures 195

Galvanneal process
Temperature measurements during the galvanneal process 317
Gibbs energy
Thermodynamics of dense boron nitride modifications and a new phase $P,T$ diagram for BN 221
Glass transition
Studies on the dielectric properties of some natural (plant) and synthetic fibres in audio frequency range and their DC conductivity at elevated temperature 435
Gorsky effect
Gorsky effect consequences of lattice expansive strain gradients in diffusion of hydrogen in metals 57
Grain boundary
Heat conduction in solids by phonons 247
Modeling the thermal conductivity of mullite/cordierite composites 277
Graphite
Thermophysical properties of POCO AXF-5Q graphite up to melting 183
Experimental investigation of the nonuniform heating effect in laser flash thermal diffusivity measurments 329
Gravity
A model of binary alloy solidification in the gravitational field 17

Hardening
Thermophysical properties of stainless steels 373
Heat of mixing
Equations of state for solid NaCl–KCl and saturated liquid NaCl–KCl–$H_2O$ 413
Heat of transformation
Inverse drop-calorimetry. A study of metastable and nonequilibrium phases 395
Heat storage
Melting point and supercooling characteristics of molten salt 401
Thermophysical properties of the composite ceramic–salt system ($SiO_2/Na_2SO_4$) 455
Hydrogen
Gorsky effect consequences of lattice expansive strain gradients in diffusion of hydrogen in metals 57
Hydroxyapatite
Thermal expansion application to assess calcination of bovine hydroxyapatite 465

Innovation
New acoustic detection technique for a magnetocaloric effect 123
Thermal transport across delaminations in aerospace composite laminate materials 351
Insulator
Opacified silica aerogel powder insulation 269
Interference
Processing of interferometric signals for a CTE measurement system 101
Interferometry
Processing of interferometric signals for a CTE measurement system 101
Characterization and thermal properties evaluation of thin films, wafers and substrates 155
IR
Thermal transport across delaminations in aerospace composite laminate materials 351
Isotope scattering
Thermal conductivity of natural and synthetic diamonds with differing isotope contents 257

Kinetics
Investigation on the thermodynamic properties of some natural silk fibres with various physical methods 425

Laminate
Thermal transport across delaminations in aerospace composite laminate materials 351
Laser
Nonequilibrium solidification of monocrystalline Si induced by ArF-excimer-laser irradiation 173
Measurement of thermal radiation and optical properties of refractory oxides and their melts under $CO_2$ laser 291
Experimental investigation of the nonuniform heating effect in laser flash thermal diffusivity measurments 329
Finite pulse time effects in flash diffusivity measurements 341
Latent heat
Analysis of a one-dimensional solidification problem with two-phase moving boundaries 71
Lattice wave
Heat conduction in solids by phonons 247
Lindemann law
The electron–phonon interaction and melting of metals 1

Liquid
Surface tension measurements on levitated aspherical liquid nickel drops 445
Liquidus
Analysis of a one-dimensional solidification problem with two-phase moving boundaries 71
Equations of state for solid NaCl–KCl and saturated liquid NaCl–KCl–$H_2O$ 413

Magnesium oxide
Thermal radiative properties of magnesium oxide at high temperatures 195
Magnetocaloric effect
New acoustic detection technique for a magnetocaloric effect 123
Martensitic
Thermal expansion studies of pre-transformation behaviour 135
Thermophysical properties of stainless steels 373
Matrix
Spectral emittance and temperature determination of carbon/SiC and SiC/SiC composites 305
Melting
The electron–phonon interaction and melting of metals 1
Thermophysical properties of POCO AXF-5Q graphite up to melting 183
Thermal radiative properties of magnesium oxide at high temperatures 195
Melting point
Melting point and supercooling characteristics of molten salt 401
Metal
Thermoelectric power of selected metals and binary alloy systems 29
Surface tension measurements on levitated aspherical liquid nickel drops 445
Metastable
Inverse drop-calorimetry. A study of metastable and nonequilibrium phases 395
Mg-PSZ
Thermal expansion measurements on creep tested Mg-PSZ 113
Microstructure
Thermal expansion measurements on creep tested Mg-PSZ 113
Mineralizer
Aesthetic parameters of highly feldspathic porcelain 229
Model
A model of binary alloy solidification in the gravitational field 17
Nonequilibrium solidification of monocrystalline Si induced by ArF-excimer-laser irradiation 173
Mullite
Modeling the thermal conductivity of mullite/cordierite composites 277

Nickel
Thermal constants for Ni, NiO, MgO, MnO and CoO at low temperatures 365
Surface tension measurements on levitated aspherical liquid nickel drops 445
Non-equilibrium
Nonequilibrium solidification of monocrystalline Si induced by ArF-excimer-laser irradiation 173
Inverse drop-calorimetry. A study of metastable and nonequilibrium phases 395
Non-uniform heating effect
Experimental investigation of the nonuniform heating effect in laser flash thermal diffusivity measurments 329

Opacity
Aesthetic parameters of highly feldspathic porcelain 229
Opacified silica aerogel powder insulation 269
Oxide
Measurement of thermal radiation and optical properties of refractory oxides and their melts under $CO_2$ laser 291
Thermal constants for Ni, NiO, MgO, MnO and CoO at low temperatures 365

Phase
Thermodynamics of dense boron nitride modifications and a new phase $P,T$ diagram for BN 221
Phase transition
Analysis of a one-dimensional solidification problem with two-phase moving boundaries 71
Phonon
The electron–phonon interaction and melting of metals 1
Heat conduction in solids by phonons 247
Modeling the thermal conductivity of mullite/cordierite composites 277
POCO
Thermophysical properties of POCO AXF-5Q graphite up to melting 183
Experimental investigation of the nonuniform heating effect in laser flash thermal diffusivity measurments 329
Polymer
Studies on the dielectric properties of some

natural (plant) and synthetic fibres in audio frequency range and their DC conductivity at elevated temperature 435
Porcelain
Aesthetic parameters of highly feldspathic porcelain 229
Pre-transformation
Thermal expansion studies of pre-transformation behaviour 135
Program
Processing of interferometric signals for a CTE measurement system 101
Pyrometry
Spectral emittance and temperature determination of carbon/SiC and SiC/SiC composites 305

Recommended value
Thermoelectric power of selected metals and binary alloy systems 29
Reference material
Reference materials for thermal expansion: certified or not? 83
Reflectivity
Thermal radiative properties of magnesium oxide at high temperatures 195
Measurement of thermal radiation and optical properties of refractory oxides and their melts under $CO_2$ laser 291
Refractory material
Total normal and spectral emittance of refractory materials for high temperature ovens 211
Reproducibility
Surface tension measurements on levitated aspherical liquid nickel drops 445
Resistivity
Thermophysical properties of POCO AXF-5Q graphite up to melting 183
Thermophysical properties of stainless steels 373

Salt
Thermophysical properties of the composite ceramic–salt system ($SiO_2/Na_2SO_4$) 455
Silica
Opacified silica aerogel powder insulation 269
Silicon
Nonequilibrium solidification of monocrystalline Si induced by ArF-excimer-laser irradiation 173
Silk
Investigation on the thermodynamic properties of some natural silk fibres with various physical methods 425
Solidification
A model of binary alloy solidification in the gravitational field 17
Solid solution
Equations of state for solid NaCl–KCl and saturated liquid NaCl–KCl–$H_2O$ 413
Solidus
Analysis of a one-dimensional solidification problem with two-phase moving boundaries 71
Specific heat
New acoustic detection technique for a magnetocaloric effect 123
Characterization and thermal properties evaluation of thin films, wafers and substrates 155
Thermophysical properties of POCO AXF-5Q graphite up to melting 183
Thermodynamics of dense boron nitride modifications and a new phase $P,T$ diagram for BN 221
Thermal constants for Ni, NiO, MgO, MnO and CoO at low temperatures 365
Thermophysical properties of stainless steels 373
Investigation on the thermodynamic properties of some natural silk fibres with various physical methods 425
Thermophysical properties of the composite ceramic–salt system ($SiO_2/Na_2SO_4$) 455
Stability
Thermal expansion application to assess calcination of bovine hydroxyapatite 465
Steel
Temperature measurements during the galvanneal process 317
Thermophysical properties of stainless steels 373
Strain
Gorsky effect consequences of lattice expansive strain gradients in diffusion of hydrogen in metals 57
Thermal expansion measurements on creep tested Mg-PSZ 113
Strain gradient
Gorsky effect consequences of lattice expansive strain gradients in diffusion of hydrogen in metals 57
Stress
Thermal expansion studies of pre-transformation behaviour 135
Superconductor
Characterization and thermal properties evaluation of thin films, wafers and substrates 155

Supercooling
Melting point and supercooling characteristics of molten salt 401
Surface tension
Surface tension measurements on levitated aspherical liquid nickel drops 445

Technique
Thermal transport across delaminations in aerospace composite laminate materials 351
Ternary system
Equations of state for solid NaCl–KCl and saturated liquid NaCl–KCl–$H_2O$ 413
Thermal expansion
Reference materials for thermal expansion: certified or not? 83
Thermal expansion measurements on creep tested Mg-PSZ 113
Thermal expansion studies of pre-transformation behaviour 135
Calculated thermal expansion of d and f transition metals 145
Characterization and thermal properties evaluation of thin films, wafers and substrates 155
Thermophysical properties of the composite ceramic–salt system ($SiO_2$/$Na_2SO_4$) 455
Thermal expansion application to assess calcination of bovine hydroxyapatite 465
Thermodynamics
Thermodynamics of dense boron nitride modifications and a new phase $P,T$ diagram for BN 221
Inverse drop-calorimetry. A study of metastable and nonequilibrium phases 395
Thermoelectric power
Thermoelectric power of selected metals and binary alloy systems 29
Thermography
Thermal transport across delaminations in aerospace composite laminate materials 351
Thermometry
Temperature measurements during the galvanneal process 317
Thin film
Characterization and thermal properties evaluation of thin films, wafers and substrates 155
Topography
Aesthetic parameters of highly feldspathic porcelain 229
Transition
Thermodynamics of dense boron nitride modifications and a new phase $P,T$ diagram for BN 221
Equations of state for solid NaCl–KCl and saturated liquid NaCl–KCl–$H_2O$ 413
Investigation on the thermodynamic properties of some natural silk fibres with various physical methods 425
Transition metal
Calculated thermal expansion of d and f transition metals 145
Translucency
Aesthetic parameters of highly feldspathic porcelain 229

Umklapp scattering
Thermal conductivity of natural and synthetic diamonds with differing isotope contents 257
Uncertainty principle
The electron–phonon interaction and melting of metals 1

Viscosity
Thermophysical properties of stainless steels 373

Wafer
Characterization and thermal properties evaluation of thin films, wafers and substrates 155

XRD
Thermal expansion application to assess calcination of bovine hydroxyapatite 465